

MEETING NOTES

Final May 16, 2016

Meeting Date: December 16, 2015

Meeting Notes
Submittal Dates: May 16, 2016 – Final Submitted to NDEP

Place: GoTo Meeting

Project/Purpose: NV Energy - Reid Gardner Station
Implementation of Administrative Order on Consent (AOC)
Quarterly AOC Meeting

Attendees
(Via GoToMeeting and telephone): Alison Oakley/NDEP
Brad Cross/ARCADIS U.S., Inc.
John Kivett/ARCADIS U.S. Inc.
Matt Johns/NV Energy
Mike Rojo/NV Energy
Jason Reed/NV Energy
Scott Dethloff/CH2M Hill
Sergio Escobar/CDWR
Peter Mesard/Exponent
Taryn Sparacio/Exponent
Alex Revchuk/Exponent
Becky Svatos/Stanley Consultants
Julie Oriano/Stanley Consultants
Mary Dolhancey/Stanley Consultants
Todd Knause/Stanley Consultants

Notes By: Julie Oriano/Stanley Consultants

A meeting was held between NV Energy and Nevada Division of Environmental Protection (NDEP) representatives on December 16, 2015. Topics discussed during the meeting are summarized below.

Petroleum Source Area Work Plans implementation (SA-10,11,13,15,16): NV Energy reported that soil characterization and excavation work is currently in progress in the petroleum source areas. Six monitoring and extraction wells that are in the footprint of the excavation areas will be plugged and abandoned (HM-50R, HR-1, HM-42, HM-44, HM-45, and HR-2). NDEP approved the plug and abandon request from NV Energy on December 11, 2015. The following information was discussed for each of the areas:

- Soil excavation has not yet begun at SA-10. One monitoring well will need to be abandoned in

this area.

- NV Energy has received laboratory data for soil samples collected in the SA-11 area and will provide NDEP with a figure of the proposed excavation footprint.
 - NV Energy proposed to defer soil excavation at SA-13 until after the decommissioning of Unit 4 (2017 – 2018) because a fiberglass fire protection water line passes through the SA-13 area. This water line would be difficult to relocate at this time without a temporary impairment of the facility's fire protection system. Jason Reed will send a letter to NDEP with this request.
 - Work is ready to begin at SA-15, with two excavation areas planned and one monitoring well to abandon prior to the excavation.
 - At SA-16, the eastern limit of the excavation has been reached and no total petroleum hydrocarbon (TPH) concentrations have been detected in the remaining soils; laboratory results for volatile organic compounds (VOCs) have not yet been received. There are four monitoring wells in the area to be abandoned. Approximately 4,000 cubic yards of petroleum-impacted soil had been removed as of the date of the meeting.
- Action Item: NV Energy to submit a request to NDEP to defer soil excavation at SA-13.

Light Non-Aqueous Phase Liquid (LNAPL) CSM Work Plan implementation (SA-14): NV Energy reported that the Laser Induced Fluorescence (LIF) investigation is in progress and should be completed today. There are two direct push borings scheduled to tag the Muddy Creek formation. AECOM plans to re-mobilize on January 4th to install monitoring wells. The investigation has not advanced off-site to the east on BLM land because BLM has not yet granted access. When BLM access is obtained, the contractor will remobilize to the site.

- Action Item: NV Energy will submit a LNAPL CSM report after the activities are complete.

Units 1,2,3 Cooling Tower Catch Basin (SA-8) Work Plan: The cooling tower catch basin has been removed and this source area is ready for sampling. NV Energy sent a figure to NDEP which describes the proposed drilling and sampling. The proposed sampling includes two mobilizations. The surface soil sampling will be completed before the end of 2015, and then in 2016 a monitoring well will be installed. Additional soil sampling will be completed, if needed, based on the results of the 2015 soil sampling. NDEP is reviewing the proposed sampling approach. NV Energy will provide a complete work plan in early 2016.

Ponds 4A/C1/C2/E2 solids removal status: The solids removal work at Ponds 4A, C1, C2, and E2 is complete, and all areas have been seeded. In total, approximately 1.2 million cubic yards of solids were removed and placed in the South Lateral Landfill Expansion.

- Action Item: NV Energy to provide Solids Removal Completion Reports for each area after the laboratory results are received and validated and after the record drawings are completed.

Pond solids/soil sampling status: The planned soil and solids sampling in Ponds 4A, C1, C2, and E2 has been completed and the data are being validated. The validated data will be included in the Solids Removal Completion Reports.

B1/B2/B3/E1 Solids Removal: Work plans for solids removal will be submitted to NDEP in 2016, and the solids removal will begin in 2017. NV Energy has begun engineering design of a new lined disposal cell for solids on the Mesa landfill. The construction work is scheduled to go out to bid in April, with the new cell construction to begin in September. It is anticipated that the new cell should be ready to receive solids by March 2017. In order to comply with the Coal Combustion Rule (CCR) requirements, all solids must be removed by April, 2018. NV Energy's goal is to have all solids removed by December 31, 2017.

- Action Item: NV Energy to provide Solids Removal Work Plans for the B Ponds and Pond E1 to NDEP for review in 2016.

MW-17 well repairs: During the recent flood, surface soil around some of the MW-17 cluster monitoring wells was washed out. Because the soil was not washed away below the solid upper portion of the casing, NV Energy does not believe the quality of the groundwater samples from the wells has been impacted. NV Energy plans to address the drainage through the well cluster area and complete any necessary repairs to the monitoring wells. During the next sampling event, the field parameters and laboratory analyses will be reviewed to determine if the wells require redevelopment.

- Action Item: NV Energy to review MW-17 data from Q1 2016 sampling event to evaluate if any of the wells require redevelopment.

IMW-2.5 well replacement: Subsurface exploration by direct push with groundwater sampling was completed on September 23, 2015 in the area of the existing IMW2.5 well cluster. The following well screen intervals were agreed to by NV Energy, CDWR, and NDEP:

- Shallow screen 8'-18' below ground surface (bgs)
- Medium screen 43'-53' bgs
- Deep screen 62'-72' bgs.

The HPT suggests that the Muddy Creek formation is at 72' bgs, with a permeable zone from 46' to 52' bgs, and a clay layer from 49'-50' bgs. The well installations will occur in 2016.

Alluvial background: The alluvial groundwater background threshold value will be re-evaluated next year after new monitoring wells are installed in the area of the existing IMW- 2.5 well cluster. In addition, NV Energy plans to evaluate if new deep wells that do not appear to be impacted by site activities can be used as alluvial background wells. NDEP stressed that the Conceptual Site-Wide Model (CSM) information is needed first to understand site conditions before reevaluating alluvial background. It was noted that the background value is not necessarily the action level, but can be used to evaluate the lateral and vertical extent of groundwater impacts.

Community Relations Fact Sheet update: Stanley Consultants is in the process of updating the fact sheet. NDEP reported that the state is migrating the website to a new platform, so the updated fact sheet may not be posted right away. There was a large file upload last month, so most of the final reports submitted in 2015 should be on the website.

- Action Item: NV Energy to provide updated Community Relations Fact Sheet to NDEP for the website.

QAPP revisions: The project Quality Assurance Project Plan (QAPP) is being reviewed and updated. NV Energy plans to submit the QAPP to NDEP for review by the end of March 2016.

- Action Item: NV Energy to provide NDEP with revised QAPP text in track changes format and summarize appendix changes separately.

September AOC meeting minutes – NDEP is currently reviewing the September 2015 meeting minutes.

- Action Item: NDEP to provide comments on the September 2015 meeting minutes.

Decommissioning and demolition schedule: The Units 1-3 cooling towers were removed in late November/December and the Units 1-3 cooling tower catch basin has also been removed. Temporary

fencing has been installed around the Units 1-3 power block and coal pile area to separate the area from Unit 4 which is still operational. No major demolition is currently planned in 2016 or 2017; although NV Energy will continue with planning and any necessary utility relocations.

BLM land acquisition update: NV Energy continues to pursue the purchase of land from the BLM that is located directly east of the plant and also on the Mesa near WMU-7. The SA 14 LIF work will be completed on NV Energy's property early in 2016. Without access to BLM land east of the station, the LIF work will be limited in this direction. NV Energy is also in the process of requesting BLM access in the North Station Area. NV Energy is evaluating the use of ash from the North Station Area to mix with solids from the B1, B2, B3, and E2 ponds when they are removed and placed in the Mesa Landfill in 2017.

Muddy River quarterly and monthly events: The 4th (and last) quarterly Muddy River event began on November 30, 2015 with groundwater and surface water measurements. Flow measurements, surface water samples, field parameter measurements, and seeps observations were conducted December 7-11. The monthly Muddy River monitoring is scheduled to continue through July 2016. NV Energy has observed that the transducer data does not appear to provide much more value than the monthly manual measurements, but the transducers are more expensive to maintain because of the need for monthly cleaning. Additionally, the large volume of data collected from the transducers is more expensive to handle and analyze. NV Energy recommends that the use of the transducers be discontinued after the February 2016 groundwater monitoring event. Monthly manual measurements would continue. Discontinuing the use of the transducers will be discussed further at the CSM workshop with NDEP in March 2016.

- Action Item: NV Energy to provide the 4th quarter 2015 Muddy River data to NDEP as it becomes available.

Muddy River water quality report: Muddy River water quality data collected by NV Energy and the Southern Nevada Water Authority from 2010-2014 were compared to applicable Nevada Water Quality Standards and a report is being drafted that includes plots of detected indicator constituents of concerns (COCs). NV Energy will submit this report to NDEP prior to the CSM workshop.

- Action Item: NV Energy to provide Muddy River Water Quality Report to NDEP prior to the CSM workshop.

Groundwater Monitoring Program update: The 2014 Annual Groundwater Monitoring Report (GMR) revisions will be submitted to NDEP this week. The 2015 Annual GMR has been drafted and will be submitted to NDEP by the end of January.

- Action Item: NV Energy to submit the revised 2014 Annual GMR in December, 2015.
- Action Item: NV Energy to submit the 2015 Annual GMR by January 28, 2016.

Groundwater Sampling Plan/Q1 2016 sampling: NV Energy will prepare tables and figures in January for the Q1 sampling event that is scheduled to begin on February 22, 2016. The tables and figures will include recommendations on well and/or parameter reductions. NDEP may want to wait until after the CSM workshop to make changes to the current groundwater sampling program.

- Action Item: NV Energy to provide tables and figures to NDEP prior to the Q1 2016 sampling event.

Results of 12/2 & 12/3/2015 Geologists' Workshops: The geologists were able to agree that the first encountered Muddy Creek clay will be used in the Earth Volumetric Studio (EVS) model. It was decided that the alluvial sediments would be divided into four hydrostratigraphic layers consisting of six zones and a fill layer.

- Action Item: Geologists representing NDEP, CDWR, and NV Energy will work together to finalize the top and bottom elevations for each hydrostratigraphic layer to be input into the EVS model.

CSM Workshop Schedule: The CSM workshop is scheduled for March 15-16, 2016 at NV Energy's office in Las Vegas. The goals for the workshop will be to review the objectives outlined in the PA2, PA3, PA5-7, and MRI Work Plans and the data collected in 2015, identify data gaps, and discuss the next steps in the AOC process.

- Action Item: NDEP to provide NV Energy with suggested items to discuss during the CSM meeting.

ACTION ITEMS STEMMING FROM DECEMBER 16, 2015 QUARTERLY AOC MEETING				
Project	Description	Estimated Delivery Date	Party Responsible	Notes
Petroleum Source Area Work Plans (SA-10, 11, 13, 15, and 16)	NV Energy requested to defer Source Area 13 Characterization and Remediation work	12-28-15	NV Energy	NDEP provided concurrence on 12-30-2015
LNAPL CSM Work Plan (SA-14)	NV Energy to submit a LNAPL CSM Report when activities are complete	2016	NV Energy	
Ponds 4A/C1/C2/E2 solids removal	NV Energy to submit Solids Removal Completion Reports for each area after the laboratory results are received and validated and after the record drawings are completed	Q2 2016	NV Energy/Stamley Consultants	
Pond B1/B2/B3/E1 Solids Removal	NV Energy to provide Solids Removal Work Plans for the B Ponds and Pond E1 to NDEP for review in 2016.	2016	NV Energy/Stamley Consultants	Solids removal expected to begin in 2017
MW-17 well repairs	NV Energy to review MW-17 data from Q1 2016 sampling event to evaluate whether well requires redevelopment.	June 2016	NV Energy/Stamley Consultants	
Community Relations Fact Sheet update	NV Energy to provide updated Community Relations Fact Sheet to NDEP for the website.	January 2016	NV Energy/Stamley Consultants	
QAPP Revisions	NV Energy to provide NDEP with revised QAPP text in track changes format and summarize appendix changes separately.	March 2016	NV Energy/Stamley Consultants	
September Meeting Minutes	NDEP to provide comments on the September 2015 meeting minutes.	--	NDEP	NDEP provided concurrence on the April 2015 meeting minutes on 9-18-15.
Muddy River Quarterly and Monthly Events	NV Energy to provide fourth quarter 2015 Muddy River data to NDEP as it becomes available	--	NV Energy/Stamley Consultants	
Muddy River Water Quality Report	NV Energy to provide Muddy River Water Quality Report to NDEP prior to the CSM workshop.	February, 2016	NV Energy/Stamley Consultants	
Groundwater Monitoring Program	NV Energy to submit the revised 2014 Annual GMR in December, 2015	December, 2015	NV Energy	Submitted December 17, 2015
Groundwater Monitoring Program	NV Energy to submit the 2015 Annual GMR by January 28, 2016	January 28, 2016	NV Energy	
Groundwater Sampling Plan	NV Energy to provide tables and figures to NDEP prior to the Q1 2016 sampling event	February, 2016	NV Energy/Stamley Consultants	Provide prior to first quarter 2016 monitoring event, tentatively scheduled for February 22, 2016.
Geologists' Workshops	Geologists representing NDEP, CDWR, and NV Energy will work together to finalize the top and bottom of each hydrostratigraphic layer to be input into the EVS model.	February, 2016	NV Energy/Stamley Consultants/ NDEP/ CDWR	
CSM Workshop	NDEP to provide NV Energy with suggested items to discuss during the CSM meeting.	February, 2016	NDEP	

**NV Energy – Reid Gardner Station
Implementation of Administrative Order on Consent
Quarterly AOC Meeting
December 16, 2015
List of Attendees**

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